1. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{9}{6} - \frac{3}{7}x \le \frac{5}{9}x - \frac{10}{4}$$

A. $[a, \infty)$, where $a \in [3, 6]$

B. $(-\infty, a]$, where $a \in [-4.5, -2.25]$

C. $(-\infty, a]$, where $a \in [3, 4.5]$

D. $[a, \infty)$, where $a \in [-5.25, -3]$

E. None of the above.

2. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-3x + 6 \ge 5x + 3$$

A. $[a, \infty)$, where $a \in [-0.4, -0.28]$

B. $[a, \infty)$, where $a \in [0.07, 1.44]$

C. $(-\infty, a]$, where $a \in [-0.2, 0.56]$

D. $(-\infty, a]$, where $a \in [-1.11, 0.15]$

E. None of the above.

3. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 8 units from the number 3.

A. $(-5, 11)$

B. $(-\infty, -5] \cup [11, \infty)$

C. $[-5, 11]$

D. $(-\infty, -5) \cup (11, \infty)$

E. None of the above

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4. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$3 - 7x < \frac{-33x + 3}{6} \le 5 - 6x$$

A. $(a, b]$, where $a \in [-1.5, 3]$ and $b \in [7.5, 11.25]$

B. $(-\infty, a] \cup (b, \infty)$, where $a \in [-0.75, 2.25]$ and $b \in [6, 12.75]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [0, 6]$ and $b \in [6, 11.25]$

D. $[a, b)$, where $a \in [0, 4.5]$ and $b \in [8.25, 12]$

E. None of the above.

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5. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$\frac{6}{3} + \frac{3}{4}x \ge \frac{9}{7}x + \frac{8}{6}$$

A. $(-\infty, a]$, where $a \in [0, 2.25]$

B. $(-\infty, a]$, where $a \in [-4.5, 0.75]$

C. $[a, \infty)$, where $a \in [0, 2.25]$

D. $[a, \infty)$, where $a \in [-2.25, 0.75]$

E. None of the above.

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6. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5 + 8x > 11x \text{ or } 6 + 3x < 4x$$

A. $(-\infty, a] \cup [b, \infty)$, where $a \in [-12, -5.25]$ and $b \in [-3.75, 3.75]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-2.25, -0.75]$ and $b \in [3.07, 7.27]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [-3, 0.75]$ and $b \in [5.25, 9]$

D. $(-\infty, a) \cup (b, \infty)$, where $a \in [-6.75, -3.75]$ and $b \in [-0.75, 2.7]$

E. $(-\infty, \infty)$

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7. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-4 + 3x < \frac{30x + 4}{4} \leq 3 + 7x$$

A. $[a, b)$, where $a \in [-3, -0.75]$ and $b \in [3, 6.75]$

B. $(a, b]$, where $a \in [-2.92, -0.38]$ and $b \in [-1.5, 7.5]$

C. $(-\infty, a) \cup [b, \infty)$, where $a \in [-9.75, -0.75]$ and $b \in [0.75, 5.25]$

D. $(-\infty, a] \cup (b, \infty)$, where $a \in [-1.5, 0.38]$ and $b \in [3, 9.75]$

E. None of the above.

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8. Using an interval or intervals, describe all the x-values within or including a distance of the given values.

No more than 2 units from the number 7.

A. $(-\infty, -5) \cup (9, \infty)$

B. $[-5, 9]$

C. $(-\infty, -5] \cup [9, \infty)$

D. $(-5, 9)$

E. None of the above

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9. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$4 + 4x > 6x \text{ or } 9 + 6x < 7x$$

A. $(-\infty, a) \cup (b, \infty)$, where $a \in [1.5, 6.75]$ and $b \in [8.25, 11.25]$

B. $(-\infty, a) \cup (b, \infty)$, where $a \in [-14.25, -3.75]$ and $b \in [-7.5, 0.75]$

C. $(-\infty, a] \cup [b, \infty)$, where $a \in [0, 3]$ and $b \in [6.75, 11.25]$

D. $(-\infty, a] \cup [b, \infty)$, where $a \in [-11.25, -3]$ and $b \in [-4.5, -0.75]$

E. $(-\infty, \infty)$

10. Solve the linear inequality below. Then, choose the constant and interval combination that describes the solution set.

$$-5x - 10 > 10x - 9$$

A. (a, ∞), where $a \in [-0.02, 0.1]$

B. (a, ∞), where $a \in [-0.09, -0.05]$

C. $(-\infty, a)$, where $a \in [-0.08, 0.04]$

D. $(-\infty, a)$, where $a \in [0, 0.47]$

E. None of the above.